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EXAMINER	
LUGO, DAVID B	

ART UNIT	PAPER NUMBER
2634	12

DATE MAILED: 12/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/310,598	SHAEFFER ET AL.	
	Examiner	Art Unit	
	David B. Lugo	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

2. With respect to Applicant's arguments regarding claim 1, Applicant states that the Office Action does not attempt to correlate the cited prior art with the claimed modes and intervals. In response, the Examiner has attempted to clarify the rejection, where the periods where the activity of the digital processing unit is reduced corresponds with "a reduced-activity mode" occurring at a first interval, and the periods where the activity of the digital processing unit is not reduced is considered a "system-communication mode other than the reduced-activity mode" occurring at a second interval, and the limitation of the second time interval being shorter than the first time interval is addressed in the rejection of claim 1 below.

3. Regarding claims 2-27, Applicant's arguments with respect to the limitation of a "known guard time for the data being communicated to the communication arrangement" are moot in view of the new grounds of rejection indicated below.

4. Regarding claims 8-10, Applicant's arguments are moot in view of the new grounds of rejection indicated below.

5. With respect to Applicant's arguments regarding the rejection of claims 5, 6 and 11-28, Applicant argues that the time control component of Berthoumieux only responds and reacts to instants when the data is being received and processed by the ADC 5, and that the proposed modification based on Krasner would undermine the objective and operation of Berthoumieux, and refers to a previous response arguing the same. In response, the Examiner notes that claims

6 and 11-28 are rejected in view of a newly cited prior art reference, thereby rendering the arguments with respect to those claims moot. In addition, the Examiner disagrees with Applicant's assertion that the combination of Krasner with Berthoumieux will undermine the operation of Berthoumieux. Berthoumieux et al. state on page 4, lines 4-9, that the separation between the instants of transmission and receiving can possibly be introduced in a permanent manner in digital processing unit 6 or in time control component 4 at the time of manufacturing, or at the time of its initial use. The master-clock control thus does not only respond to the detection means 8, as asserted by Applicant, and the device resulting from the proposed combination will be able to function properly, as it is considered to be well within the skill level of a person of ordinary skill in the art to produce an operational communication device using the teachings of Berthoumieux and Krasner.

6. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The motivation in each of the rejections under 35 U.S.C. 103(a) is found in either the references themselves, or in the knowledge generally available to one of ordinary skill in the art.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthoumieux et al. European Patent 0 447 302 (English translation) (cited in previous Office action).

9. Regarding claim 1, Berthoumieux et al. teach a mobile radio communication device having analog circuitry (transmitter-receiver component 2, channel selection component 3, analog/digital conversion component 5) and digital signal processing circuitry (processing unit 6) clocked sufficiently fast to generate noise, where the activity of the digital processing unit is reduced during transmission or receiving, as stated on lines 1-4 of page 3. Berthoumieux et al. further disclose means of detection 8 of the instants corresponding to transmission or receiving of radio signals in order to reduce the activity of the digital processing unit during these instants, as stated in the last sentence of page 3. The periods where the activity of the digital processing unit is reduced corresponds with "a reduced-activity mode" occurring at a first interval, and the periods where the activity of the digital processing unit is not reduced is considered a "system-communication mode other than the reduced-activity mode" occurring at a second interval.

10. Berthoumieux et al. do not expressly state that the second timer interval is shorter than the first time interval. However, Berthoumieux et al. do state that the speed of the clocks of the digital circuitry is significantly faster than the speed of the clocks of the analog circuitry (see page 3, lines 25-30). One of ordinary skill in the art would recognize that the data throughput of the digital circuitry is faster than the data throughput of the analog circuitry in accordance with the difference in their relative clock speeds. Accordingly, since the data throughput for the digital circuitry exceeds the data throughput for the analog circuitry due to the difference in their relative clock speeds, the digital circuitry needs less time to process the received data.

11. Therefore, based upon the digital circuitry needing less time to operate upon the data than the analog circuitry, it would have been obvious to one of ordinary skill in the art to operate the digital circuitry during a shorter period than that of the analog circuitry processes data in order to conserve power consumed by the digital circuitry.

12. Regarding claim 7, the first data-communication interval is considered to be substantially greater than the second data-communication interval (see rejection of claim 1 above).

13. Regarding claim 9, Berthoumieux et al. further disclose a memory circuit coupled between the analog circuitry and the digital processing circuitry (see first paragraph starting on page 4). Since the communications device is capable of transmitting data, the analog circuitry is considered capable of reading data out of a memory circuit for transmission, and the digital signal processing circuitry is considered capable of writing data into the memory circuit.

14. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang U.S. Patent 5,912,644 in view of Berthoumieux et al.

15. Regarding claim 2, Wang disclose a communication device in Fig. 7 comprising analog circuitry 89 and digital circuitry 90, where communication between two stations is realized via frames which include known guard times, where the device receives a signal during a first portion of a frame 18, and transmits a signal during a second portion of the frame 20 (see Fig. 2). Wang further discloses a guard time 19 between frame portions 18 and 20, where in Fig. 4, for example, the guard period 49 is significantly shorter than a previous reception period 48 for a responding station.

16. Wang does not disclose that the analog circuitry is used to capture information in a first time interval while the digital signal processing circuitry is in a reduced activity mode, and in a

mode other than the reduced activity mode occurring during the guard time and during a second shorter time interval, the data is clocked using digital signal processing circuitry to permit digital signal processing of the captured data.

17. Berthoumieux et al. teach a mobile radio communication device having analog circuitry and digital signal processing circuitry, where the activity of the digital processing unit is reduced during instants of transmission or receiving (see page 3, lines 1-4). The periods where the activity of the digital processing unit is reduced corresponds with "a reduced-activity mode" occurring at a first interval, and the periods where the activity of the digital processing unit is not reduced is considered a "system-communication mode other than the reduced-activity mode" occurring at a second interval.

18. It would have been obvious to one of ordinary skill in the art to use the teaching of Berthoumieux et al. to reduce the activity of the digital processing unit during instants of transmission or receiving and process received data with the digital processing unit during other portions of the frame (guard time 14), in the communication device of Wang in order to decrease the magnetic disturbances which could influence the transmission or receiving, as stated by Berthoumieux et al. in page 3, lines 2-4.

19. Regarding claim 3, the received data of Wang are received in the form of low-energy data. Wang does not expressly disclose that both the analog and digital circuitry are on the same chip.

20. However, it is well known to provide both the analog and digital portions of a circuit on the same chip. Therefore, it would have been obvious to one of ordinary skill in the art to provide both the analog and digital circuitry on the same chip in order to conserve space.

21. Regarding claim 4, in the combination of Wang and Berthoumieux et al., the data is received in the form of low-energy data, and Berthoumieux et al. further state that it is known that the digital data processed by the digital processing unit is data which are put in memory coming out of an A/D conversion component (see first paragraph starting on page 4).

22. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Berthoumieux et al. as applied to claim 2 above, and further in view of Krasner U.S. Patent 5,841,396 (cited in previous Office Action).

23. Regarding claim 5, Wang and Berthoumieux et al. disclose a mobile radio communications device as described above, but do not expressly teach that the analog circuitry is inhibited from storing data in the memory.

24. Krasner teaches a receiver comprising both analog circuitry (RF to IF Converter 42, ADC 44) and digital circuitry (DSP 32) where the power to the analog circuitry is reduced after data collection is complete (see col. 7 lines 17-20).

25. It would have been obvious to one of ordinary skill in the art to employ the teaching of reducing the power to the analog circuitry after data collection, as disclosed by Krasner, in the mobile device of Wang and Berthoumieux et al. in order to prolong the life of the battery in the mobile unit, as Krasner discusses the need to conserve power to increase battery life (see col. 8, lines 27-28). Further, one of ordinary skill in the art would recognize that the analog circuitry would be inhibited from performing any operations, including accessing memory, when it is off.

26. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berthoumieux et al. in view of Krasner.

27. Regarding claim 6, Berthoumieux et al. disclose a mobile radio communications device as described above, but do not expressly teach that power is reduced to the analog circuitry.

28. Krasner teaches a receiver comprising both analog circuitry (RF to IF Converter 42, ADC 44) and digital circuitry (DSP 32) where the power to the analog circuitry is reduced after data collection is complete (see col. 7 lines 17-20).

29. It would have been obvious to one of ordinary skill in the art to employ the teaching of reducing the power to the analog circuitry after data collection, as disclosed by Krasner, in the mobile device of Berthoumieux et al. in order to prolong the life of the battery in the mobile unit, as Krasner discusses the need to conserve power to increase battery life (see col. 8, lines 27-28).

30. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthoumieux et al. in view of Cidon et al. U.S. Patent 4,991,772.

31. Regarding claim 8, Berthoumieux et al. disclose a mobile radio communications device as described above, and further state that it is known that the digital data processed by the digital processing unit is data which are put in memory coming out of an A/D conversion component.

32. Berthoumieux et al. do not expressly disclose that the memory is written at a rate that is asynchronous to the rate at which data is read out.

33. Memory circuits that allow data to be written at a rate that is asynchronous to the rate at which data is read out are well known in the art. For instance, Cidon et al. describe memory chips with asynchronous read/write capability (see col. 13, lines 10-12).

34. It would have been obvious to one of ordinary skill in the art to use a memory with asynchronous read/write capability in the mobile communications device of Berthoumieux et al. because it provides independent buffering without the need for a common clock.

35. Regarding claim 10, Berthoumieux et al. disclose a mobile radio communications device as described above, and further state that it is known that the digital data processed by the digital processing unit is data which are put in memory coming out of an A/D conversion component. The analog circuitry is thus considered to write data into the memory circuit and the digital signal processing circuitry is considered to read data from the memory circuit.

36. Berthoumieux et al. do not expressly disclose that the memory is a FIFO memory.

37. FIFO memory circuits are well known in the art (see Cidon et al., col. 13, lines 10-12).

38. It would have been obvious to one of ordinary skill in the art to use a FIFO memory in the mobile communications device of Berthoumieux et al. because data can be written to or read from the memory from the analog or digital circuitry at its own independent clock speed without the need for a synchronous clock.

39. Claims 11-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Berthoumieux et al. and Krasner.

40. Regarding claim 11, Wang discloses a communication device in Fig. 7 comprising analog circuitry 89 and digital circuitry 90, where communication between two stations is realized via frames which include known guard times, where the device receives a signal during a first portion of a frame 18, and transmits a signal during a second portion of the frame 20 (see Fig. 2). Wang further discloses a guard time 19 between frame portions 18 and 20, where in Fig. 4, for example, the guard period 49 is significantly shorter than a previous reception period 48 for a responding station.

41. Wang does not disclose that the analog circuitry is used to capture information in a first time interval while the digital signal processing circuitry is in a reduced activity mode, and

during a second shorter time interval, the analog circuitry is disabled during the guard time and the data is processed with the digital signal processing circuitry.

42. Berthoumieux et al. teach a mobile radio communication device having analog circuitry and digital signal processing circuitry, where the activity of the digital processing unit is reduced during instants of transmission or receiving (see page 3, lines 1-4). The period where the activity of the digital processing unit is reduced corresponds with "a reduced-activity mode" occurring at a first interval, and the period where the activity of the digital processing unit is not reduced occurs at a second interval.

43. It would have been obvious to one of ordinary skill in the art to use the teaching of Berthoumieux et al. to reduce the activity of the digital processing unit during instants of transmission or receiving and process received data with the digital processing unit during other portions of the frame (guard time 14), in the communication device of Wang in order to decrease the magnetic disturbances which could influence the transmission or receiving, as stated by Berthoumieux et al. in page 3, lines 2-4.

44. Krasner teaches a receiver comprising both analog circuitry (RF to IF Converter 42, ADC 44) and digital circuitry (DSP 32) where the power to the analog circuitry is reduced after data collection is complete (see col. 7 lines 17-20).

45. It would have been obvious to one of ordinary skill in the art to employ the teaching of reducing the power to the analog circuitry after data collection, as disclosed by Krasner, in the mobile device of Wang and Berthoumieux et al. in order to prolong the life of the battery in the mobile unit, as Krasner discusses the need to conserve power to increase battery life (see col. 8, lines 27-28).

46. Regarding claim 12, Wang does not expressly disclose that both the analog and digital circuitry are on the same chip.

47. However, it is well known to provide both the analog and digital portions of a circuit on the same chip. Therefore, it would have been obvious to one of ordinary skill in the art to provide both the analog and digital circuitry on the same chip in order to conserve space.

48. Regarding claim 13, in the combination of Wang and Berthoumieux et al., the digital processing circuitry is in a reduced activity mode while the analog circuitry is receiving data, and Berthoumieux et al. further state that it is known that the digital data processed by the digital processing unit is data which are put in memory coming out of an A/D conversion component.

49. Regarding claims 14 and 15, including the memory to be part of or distinct from the analog circuitry is deemed a design consideration that fails to patentably distinguish over the prior art of record.

50. Regarding claim 16, it is known that high frequency RF signals received by the mobile station are generally low level (see Berthoumieux page 2, first two paragraphs).

51. Regarding claim 17, the communication device of Wang includes means for transmitting data.

52. Regarding claims 18, 19 and 25, Wang discloses a communication device in Fig. 7 comprising analog circuitry 89 and digital circuitry 90, where communication between two stations is realized via frames which include known guard times, where the device receives a signal during a first portion of a frame 18, and transmits a signal during a second portion of the frame 20 (see Fig. 2). Wang further discloses a guard time 19 between frame portions 18 and 20,

where in Fig. 4, for example, the guard period 49 is significantly shorter than a previous reception period 48 for a responding station.

53. Wang does not disclose that the circuitry is implemented in a single chip, the digital signal processing circuitry has a reduced activity mode and a high speed data processing mode, the analog circuitry is used to capture information in a first time interval while the digital signal processing circuitry is in the reduced activity mode, and the analog circuitry is disabled during the guard time and during a second shorter time interval while the data is processed with the digital processing circuitry.

54. Berthoumieux et al. teach a mobile radio communication device having analog circuitry and digital signal processing circuitry, where the activity of the digital processing unit is reduced during instants of transmission or receiving (see page 3, lines 1-4). The periods where the activity of the digital processing unit is reduced corresponds with "a reduced-activity mode" occurring at a first interval, and the periods where the activity of the digital processing unit is not reduced is considered a "high speed processing mode" occurring at a second interval.

55. It would have been obvious to one of ordinary skill in the art to use the teaching of Berthoumieux et al. to reduce the activity of the digital processing unit during instants of transmission or receiving and process received data with the digital processing unit during other portions of the frame (guard time 14), in the communication device of Wang in order to decrease the magnetic disturbances which could influence the transmission or receiving, as stated by Berthoumieux et al. in page 3, lines 2-4.

56. Krasner teaches a receiver comprising both analog circuitry (RF to IF Converter 42, ADC 44) and digital circuitry (DSP 32) where the power to the analog circuitry is reduced after data collection is complete (see col. 7 lines 17-20).

57. It would have been obvious to one of ordinary skill in the art to employ the teaching of reducing the power to the analog circuitry after data collection, as disclosed by Krasner, in the mobile device of Wang and Berthoumieux et al. in order to prolong the life of the battery in the mobile unit, as Krasner discusses the need to conserve power to increase battery life (see col. 8, lines 27-28).

58. Further, it is well known to provide both the analog and digital portions of a circuit on the same chip. Therefore, it would have been obvious to one of ordinary skill in the art to provide both the analog and digital circuitry on the same chip in order to conserve space.

59. Regarding claims 20-22, Wang shows that both the digital signal processing circuitry and the analog circuitry are configured and arranged to receive and transmit data.

60. Regarding claims 23 and 24, Wang discloses a communication device in Fig. 7 comprising analog circuitry 89 and digital circuitry 90, where communication between two stations is realized via frames which include known guard times, where the device receives a signal during a first portion of a frame 18, and transmits a signal during a second portion of the frame 20 (see Fig. 2). Wang further discloses a guard time 19 between frame portions 18 and 20, where in Fig. 4, for example, the guard period 49 is significantly shorter than a previous reception period 48 for a responding station.

61. Wang does not disclose that the analog circuitry is used to capture information in a first time interval while the digital signal processing circuitry is in a reduced activity mode, and

during a second shorter time interval, the additional data presented to the analog circuitry is disregarded during the guard time and the data is processed with the digital signal processing circuitry.

62. Berthoumieux et al. teach a mobile radio communication device having analog circuitry and digital signal processing circuitry, where the activity of the digital processing unit is reduced during instants of transmission or receiving (see page 3, lines 1-4). The period where the activity of the digital processing unit is reduced corresponds with "a reduced-activity mode" occurring at a first interval, and the period where the activity of the digital processing unit is not reduced occurs at a second interval. Berthoumieux et al. further state that it is known that the digital data processed by the digital processing unit is data which are put in memory coming out of an A/D conversion component.

63. It would have been obvious to one of ordinary skill in the art to use the teaching of Berthoumieux et al. to reduce the activity of the digital processing unit during instants of transmission or receiving and process received data with the digital processing unit during other portions of the frame (guard time 14), in the communication device of Wang in order to decrease the magnetic disturbances which could influence the transmission or receiving, as stated by Berthoumieux et al. in page 3, lines 2-4.

64. Krasner teaches a receiver comprising both analog circuitry (RF to IF Converter 42, ADC 44) and digital circuitry (DSP 32) where the power to the analog circuitry is reduced after data collection is complete (see col. 7 lines 17-20).

65. It would have been obvious to one of ordinary skill in the art to employ the teaching of reducing the power to the analog circuitry after data collection, as disclosed by Krasner, in the

mobile device of Wang and Berthoumieux et al. in order to prolong the life of the battery in the mobile unit, as Krasner discusses the need to conserve power to increase battery life (see col. 8, lines 27-28). One of ordinary skill in the art would recognize that any data presented to the analog circuitry during the period when it is powered down would be disregarded.

66. Regarding claim 26, Wang further discloses in Fig. 4 that the period for reception 48 comprises at least 1400 symbols, where the guard period 49 comprises 12 symbols, and thus period 48 comprises at least 90 percent of a time period including periods 48 and 49, where the guard period comprises no more than the remaining portion of the time period.

67. Regarding claim 27, Wang discloses a radio communication device in Fig. 7 comprising analog circuitry 89 and digital circuitry 90, where communication between two stations is realized via frames which include known guard times, where the device receives a signal during a first portion of a frame 18, and transmits a signal during a second portion of the frame 20 (see Fig. 2). Wang further discloses a guard time 19 between frame portions 18 and 20.

68. Wang does not disclose that the digital signal processing circuitry has a reduced activity mode and a high speed data processing mode, the analog circuitry is arranged to process data in a first time interval while the digital signal processing circuitry is in a reduced activity mode, and a timer controller for causing during the guard period, the processing of data by the analog circuitry to be effectively disabled and the digital signal processing circuitry to process the data.

69. Berthoumieux et al. teach a mobile radio communication device having analog circuitry and digital signal processing circuitry, where the activity of the digital processing unit is reduced during instants of transmission or receiving (see page 3, lines 1-4). The period where the activity of the digital processing unit is reduced corresponds with "a reduced-activity mode" occurring at

a first interval, and the period where the activity of the digital processing unit is not reduced occurs at a second interval.

70. It would have been obvious to one of ordinary skill in the art to use the teaching of Berthoumieux et al. to reduce the activity of the digital processing unit during instants of transmission or receiving and process received data with the digital processing unit during other portions of the frame (guard time 14), in the communication device of Wang in order to decrease the magnetic disturbances which could influence the transmission or receiving, as stated by Berthoumieux et al. in page 3, lines 2-4.

71. Krasner teaches a receiver comprising both analog circuitry (RF to IF Converter 42, ADC 44) and digital circuitry (DSP 32) where the power to the analog circuitry is reduced after data collection is complete (see col. 7 lines 17-20).

72. It would have been obvious to one of ordinary skill in the art to employ the teaching of reducing the power to the analog circuitry after data collection, as disclosed by Krasner, in the mobile device of Wang and Berthoumieux et al. in order to prolong the life of the battery in the mobile unit, as Krasner discusses the need to conserve power to increase battery life (see col. 8, lines 27-28).

73. Regarding claim 28, Berthoumieux et al. disclose lowering the speed of functioning of the clocks of the digital processing unit (see first paragraph starting on page 3).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David B. Lugo** whose telephone number is **(703) 305-0954**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at **(703) 305-4714**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

P.O. Box 1450

Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

dbl
12/14/03

YOUNG T. TSE
PRIMARY EXAMINER